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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

February 18, 1999

Ms. Magalie Roman Salas  
Office of the Secretary  
Federal Communications Commission  
The Portals  
445 Twelfth Street, S.W., Room 8143  
12<sup>th</sup> Street Lobby, TW-A325  
Washington, DC 20554

RE: CC Docket No. 94-102 ✓

Dear Ms. Salas:

On February 17, 1999, the Wireless Consumers Alliance, represented by Carl Hilliard, President and George Weimer, Vice President, Trott Communications met with the following staff members of the Federal Communications Commission regarding the Cellular Telecommunication Industry Association's Automatic A/B Roaming proposal:

Commission Staff

Peter Tenhula, Legal Advisor to Commissioner Powell  
Dan Connors, Legal Advisor to Commissioner Ness

Wireless Telecommunications Bureau

Thomas Sugrue, Chief of the Bureau  
Jim Schlichting, Deputy Bureau Chief  
Robert Calaff, Assistant Bureau Chief  
John Cimko, Chief, Policy Division

Pursuant to Section 1.1206 of the Commissioner's Rules, an original and one copy of their letter and its attachments are being filed with your office.

No. of Copies rec'd 241  
12/1 A B C D E

**REVIEW AND COMPARISON  
OF  
AUTOMATIC A/B ROAMING  
AND  
STRONGEST SIGNAL**

**By  
WIRELESS CONSUMERS ALLIANCE**

**February, 1999**

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# **PUBLIC EXPECTATIONS ABOUT THE ABILITY OF WIRELESS PHONES TO REACH 911**

“As many as 80% to 90% of wireless users bought their phones for safety reasons, according to various sources.” *Telephony*, October 21, 1996.

“I carry it like an insurance policy,” says Bill Tereault, who has subscribed to cellular service for years. “I don’t think I’ve used it 15 minutes in the past year. I just use it for emergencies and if someone has to get hold of me and I’m on the road.” *Saint Paul Pioneer Press*, November 24, 1997.

“Most people believe that they can call 911 [using cellular phones] in the same way they can get emergency service at home.” *Chicago Daily Herald*, December 22, 1997.

“Some cellular users have come to believe that their wireless phones will work almost anywhere”. *The Idaho Statesman*, July 28, 1998.

“Victims Will Find Help a Cell Call Away”. “With the (cell) phones, they (victims of domestic violence) will be able to call for help no matter where they are”. Sgt Peggy Greer, St. Cloud Police Department. *The Orlando Sentinel*, March 22, 1997.

“With wireless phones social workers can immediately access 911 in an emergency situation.” *PR Newswire*, September 29, 1998.

“Police have begun giving cellular phones or portable alarms to victims of abuse so they will be able to summon help quickly. *Washington Post*, January 27, 1999.



At some point it stops being your  
**wireless phone**  
and just becomes  
your **phone.**

Like maybe,  
tomorrow.

It's all within your reach.



To market, to market, to pizza joint, to peewee soccer. AT&T Digital One Rate<sup>SM</sup> transforms your wireless phone from something-for-emergencies into something-for-everything.

One low rate in all 50 states. No roaming or long distance charges. No coming home with the wrong parsley.

Shorter errands. Longer weekends. Maybe you really can have it all, if you get it all from the right place.

AT&T Digital One Rate

© 1998 AT&T. Available with new digital phones in many areas. Domestic calls only.

[www.att.com/wireless](http://www.att.com/wireless)

*The State's Largest Cellular Telephone System*

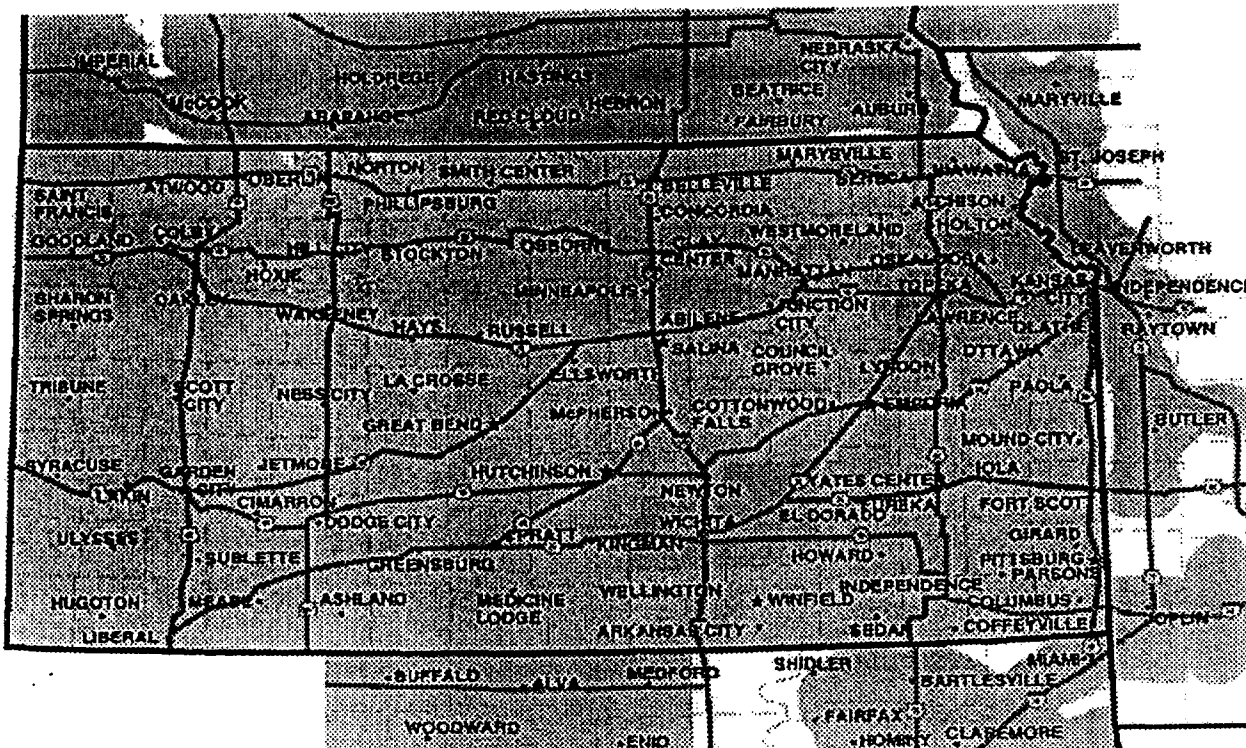
home news feedback employment site map search

[Roaming Map](#)  
[Coverage Map](#)

*The State's Largest Cellular Telephone System*

**COVERAGE AREA**

**ONE**  
 STATEWIDE  
 SUPERSYSTEM  
 With Over  
 140 Towers!  
 35% MORE COVERAGE  
 than all the  
 competitors combined

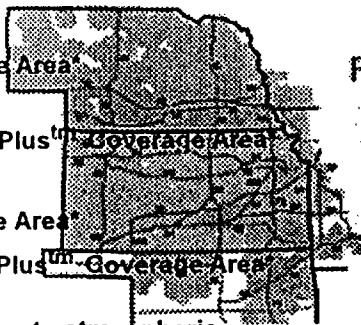


**"B" SIDE SERVICE**

- ☐ Kansas Cellular Coverage Area\*
- ☐ Future Coverage Area\*
- ☐ Freedom Across Kansas Plus™ Coverage Area\*\*

**"A" SIDE SERVICE**

- ☒ Kansas Cellular Coverage Area\*
- ☐ Freedom Across Kansas Plus™ Coverage Area\*\*



**FREEDOM ACROSS KANSAS PLUS™**  
 Five State Coverage

\*Actual coverage may vary due to atmospheric conditions, terrain or customer equipment.  
 \*\*Based on recent FCC September 1998 filings

\*Actual coverage may vary due to atmospheric conditions, terrain or customer equipment.

\*\* Based on recent FCC filings.

Long Distance	Cellular	Digital	Internet	Paging	Press Releases
Customer Service	Advantages	Glossary	Coverage	What's New	Where to Find Us

# **THE REALITY . . . . .** **WIRELESS COVERAGE IS** **FULL OF “HOLES”**

“Cellular phone coverage in many parts of rural Idaho is unreliable or non-existent. And without cellular service, you can’t reach 911 in an emergency.” *The Idaho Statesman*, July 28, 1998.

“For some users of cellular telephones, this may come as a surprise: That wireless phone you bought as a safety device might not be able to reach 911 in an emergency. . . . Wireless companies don’t provide service in mostly rural areas, especially in West Texas, so a call could falter because there’s no way to connect it.” *Austin American-Statesman*, July 18, 1998.

# Holes In Your Coverage?

Then Check Out **AIRTOUCH™**  
Cellular  
1-800-AIRTOUCH

- Ina & Shannon
- Ajo & 16th Avenue
- Speedway & Craycroft

**ELLER**

TUCSON, AZ - 11/198

# **The Question . . .**

“Would you want a society that valued emergency call completion and location identification; a society where cellular systems could utilize the strengths of both networks to eliminate dead zones? Remember: 100,000 emergency calls are made from cellular phones every day.” Commissioner Gloria Tristani, 2/9/99.

The answer to this question is “yes” and the Commission has two proposals before it to “utilize the strength of both networks to eliminate dead zones”.<sup>1</sup> On October 15, 1995 the Alliance proposed Strongest Signal for this purpose. Three years later, CTIA proposed Automatic A/B Roaming as an alternative. The following materials contain a comparison of the two proposals.

---

<sup>1</sup> Both the Alliance and CTIA agree that the alternate proposals, such as “double push” are inferior solutions.

# **WHAT WE CAN AGREE ABOUT . . . .**

**We agree with the CTIA statement of priorities, in the order listed, for handling 911 calls. (Mobile Phone News, 6/8/98, quoting Tim Ayers).**

- **“Provide a higher probability of wireless 911 call completion”**
- **“with access to available, clear, voice channels to 911 call takers”**
- **“limit call-connection delay to no more than five seconds”**
- **“retain E-911 phase 1 and phase II features and capabilities”**
- **“be applicable to all air-interface technologies.”**
- **“If preferred radio channels are not found, assigned to or maintained by a wireless phone, the system should attempt alternative access by using other frequency bands and air interface modes available to the phone.**

1ST STORY of Level 1 printed in FULL format.

Copyright 1998 Phillips Business Information, Inc.  
MOBILE PHONE NEWS

June 8, 1998

SECTION: Vol. 16, No. 23

LENGTH: 613 words

HEADLINE: BRIEFS

BODY:

#### CTIA Proposes Criteria For Emergency Calls

The Cellular Telecommunications Industry Association (CTIA) is asking the Telecommunications Industry Association (TIA) to review possible enhancements to the public safety capabilities of wireless phones in response to the Ad Hoc Alliance for Public Access to 911's proposal that the FCC adopt a "strongest signal" requirement for wireless 911 (MPN, May 11). The CTIA is suggesting that the systems: provide a higher probability of wireless 911 call completion with access to available, clear, voice channels to 911 call takers; limit call-connection delay to no more than five seconds; retain E-911 phase I and phase II features and capabilities; and be applicable to all air-interface technologies. If preferred radio channels are not found, assigned to or maintained by a wireless phone, the system should attempt alternative access by using other frequency bands and air interface modes available to the phone, CTIA said. (Tim Ayers, CTIA, 202/736-3203.)

#### Bosch Telecom's Multi-Band GSM Phone Debuts In U.S.

Bosch Telecom GmbH of Germany has begun North American marketing of its World 718 handset, with Audiovox Communications Corp. [VOX] as distributor and GSM-1900 operator Omnipoint Communications Inc. [OMPT] announcing that it will make the multi-frequency phone available to subscribers. The GSM handset, which is able to shift between the 900 MHz and 1.9 GHz frequency bands automatically, has been in distribution in European markets for the last several weeks. Meanwhile, GSM-900 operator SmarTone Telecommunications has announced its designation as the exclusive distributor of the World 718 in Hong Kong. Omnipoint expects to sell the phone for less than \$300 initially. (Laura Borgstede, Baron, McDonald & Wells, 919/468-1323.)

#### Centurion Named Exporter Of The Year

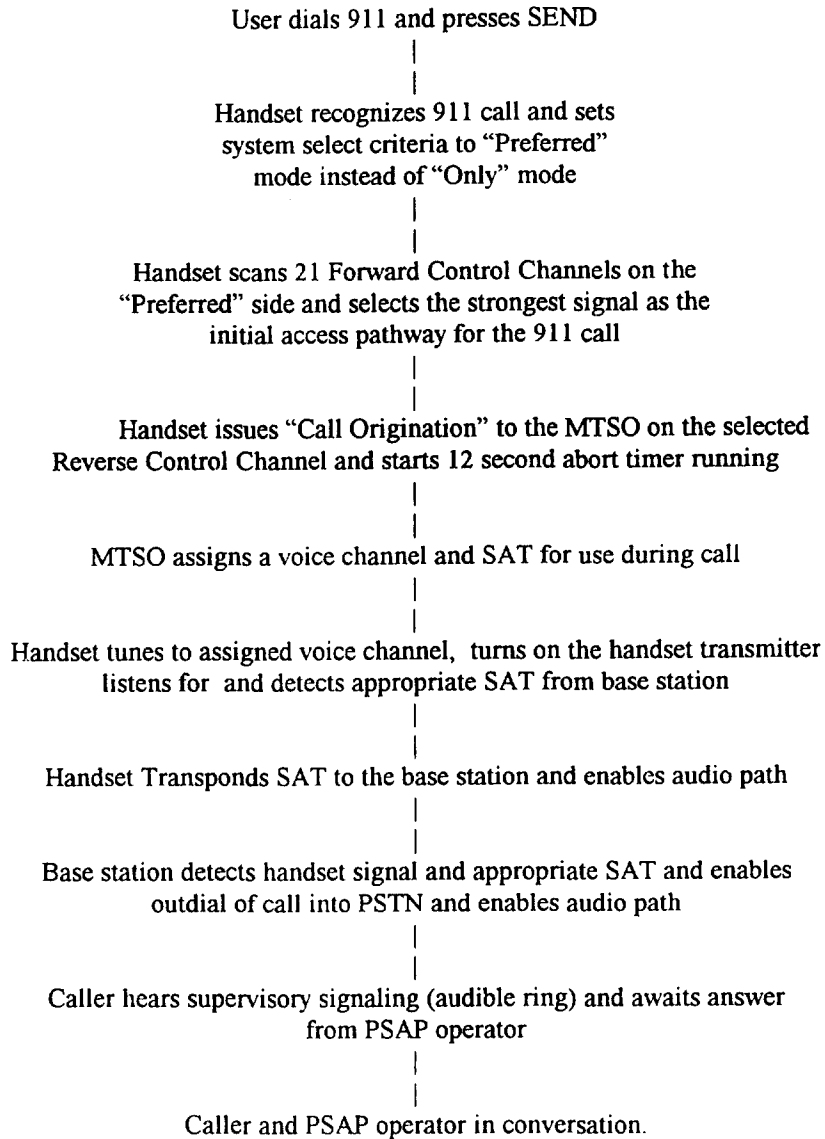
Centurion International Inc. has been named 1997 Exporter of the Year by the Midwest International Trade Association (MITA), based on the company's exports as a percentage of total sales and increases in exports from the prior year. Centurion's international sales of its antennas and power products for the wireless industry increased by more than 300 percent from 1996 to 1997. In making the award, MITA also recognized Centurion's aggressive bid to succeed in the Asia/Pacific Rim wireless market, including opening a manufacturing facility in Shanghai, China. (Elaine Blaugh, E Comm International, 520/620-0063.)

Strongest Signal achieves the first three, the most important objectives, but Automatic A/B Roaming does NOT!

# **FLOW CHARTS SHOWING THE OPERATION OF AUTOMATIC A/B ROAMING**

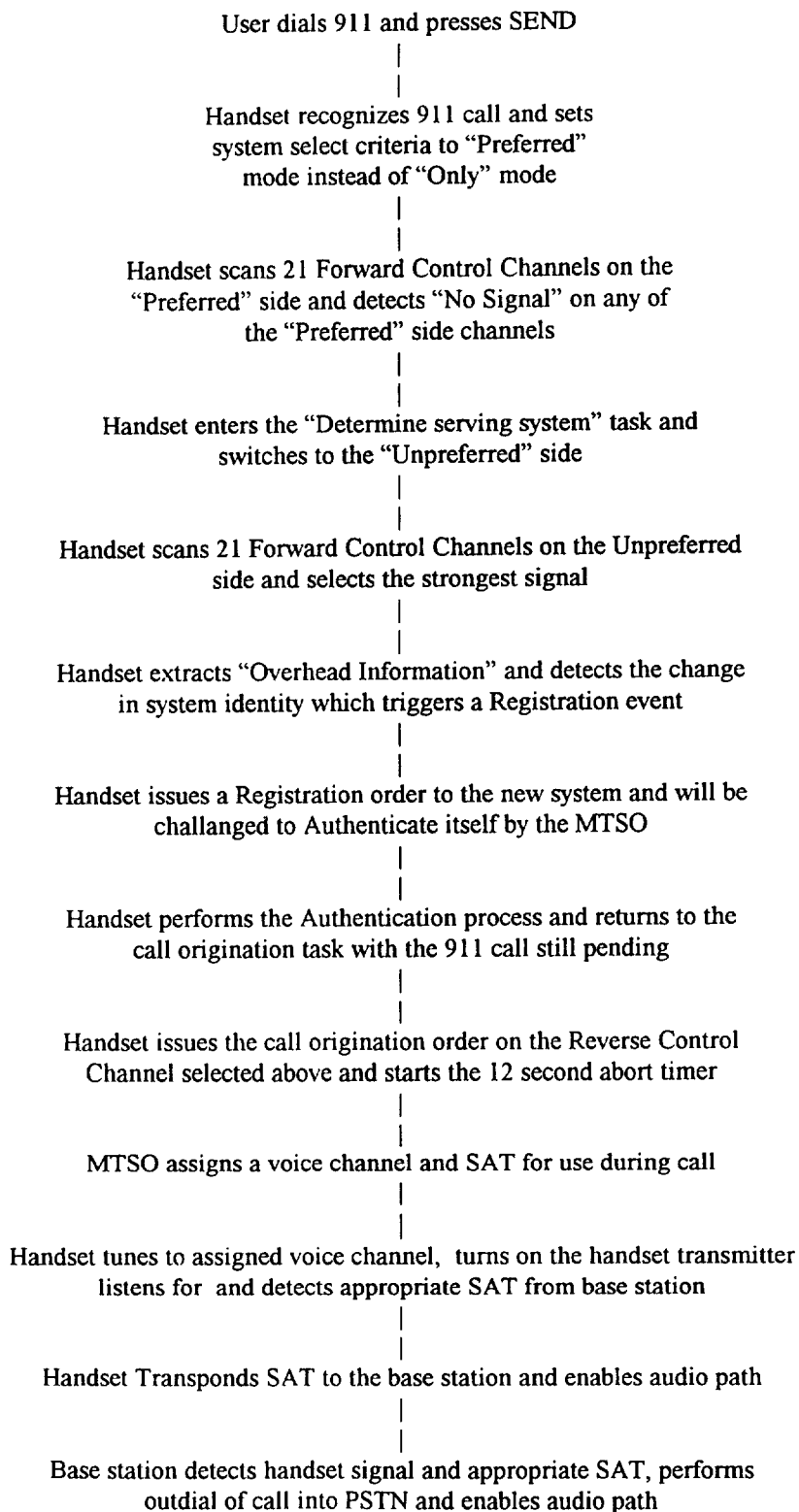
### Automatic A/B Roaming

*Call Flow at handset if "Preferred" system is able to find a channel to handle the call without regard to the quality of the channel provided*



## Automatic A/B Roaming

*Call flow if "No Signal" from "Preferred" carrier*

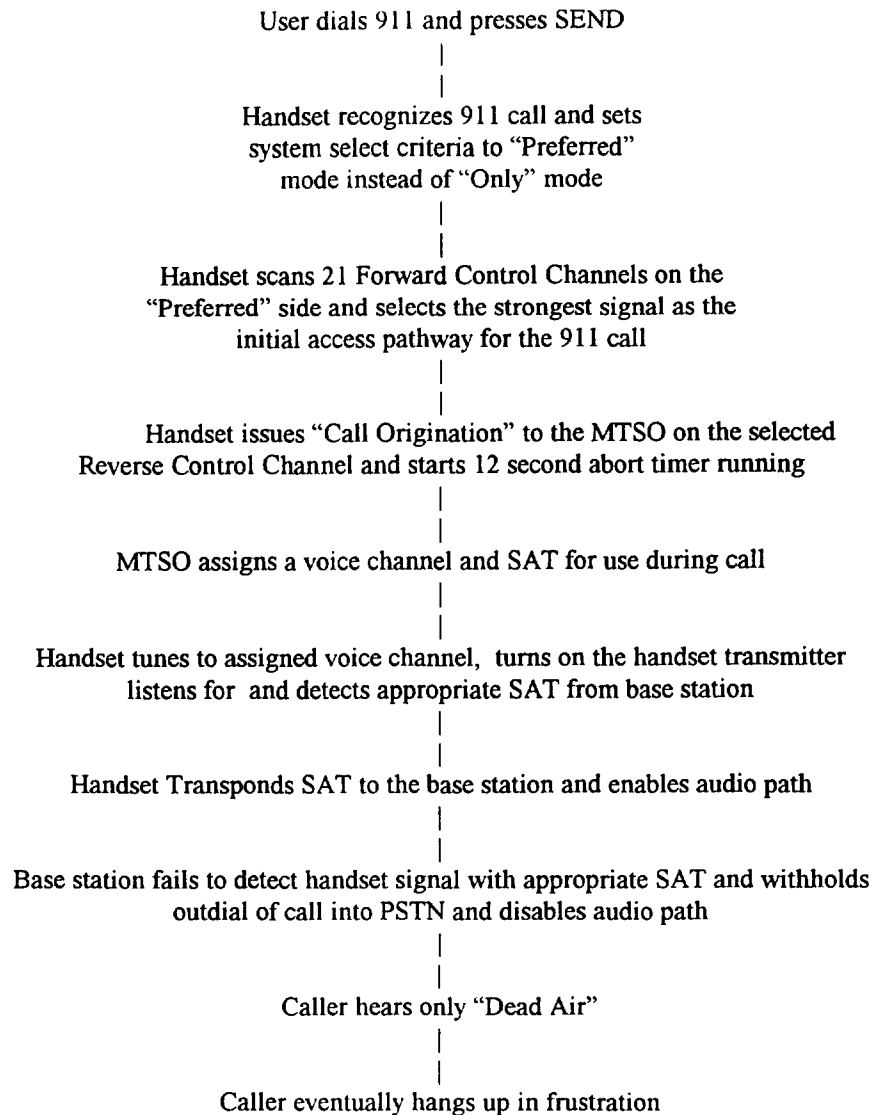


Caller hears supervisory signaling (audible ring) and awaits answer  
from PSAP operator

Caller and PSAP operator in conversation.

### Automatic A/B Roaming

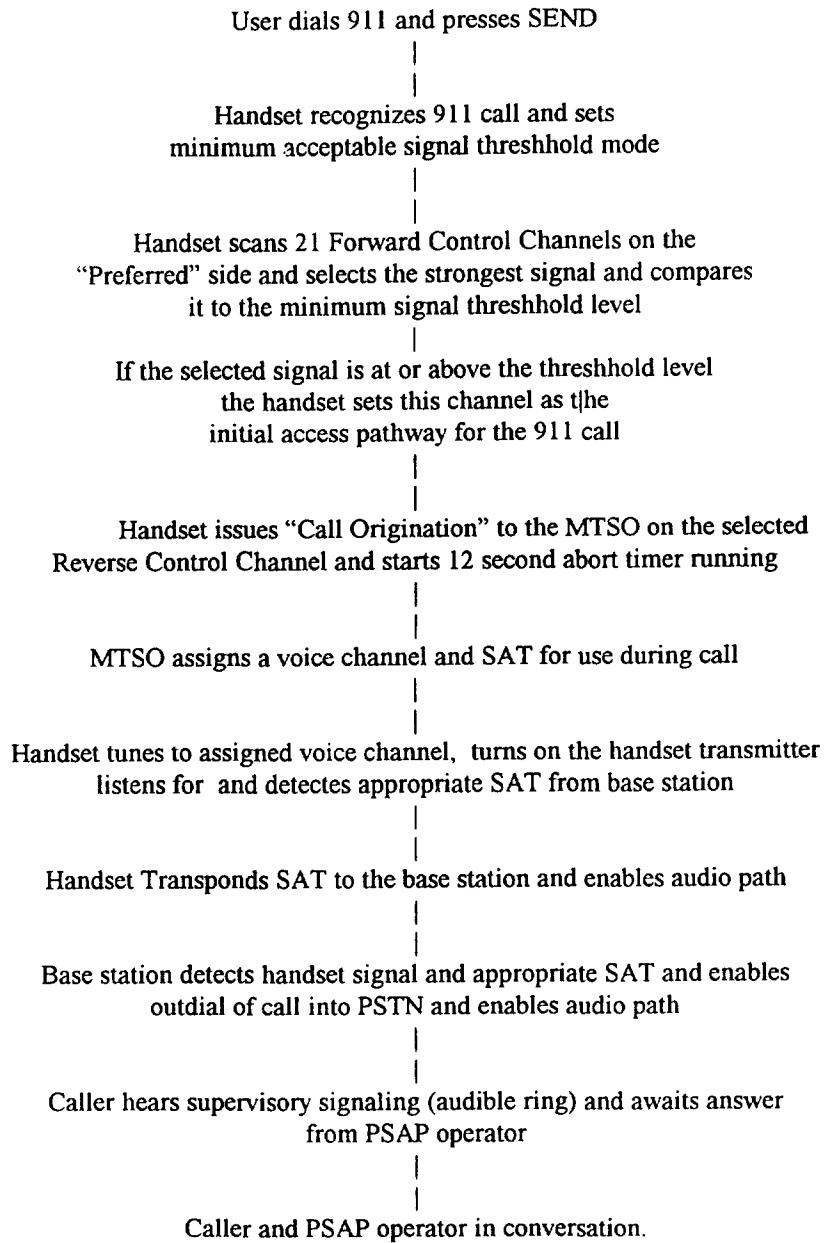
*Call Flow at handset if "Preferred" system signal is unusable but present  
(Handset Lock-Up)*



# **FLOW CHARTS SHOWING THE OPERATION OF STRONGEST SIGNAL**

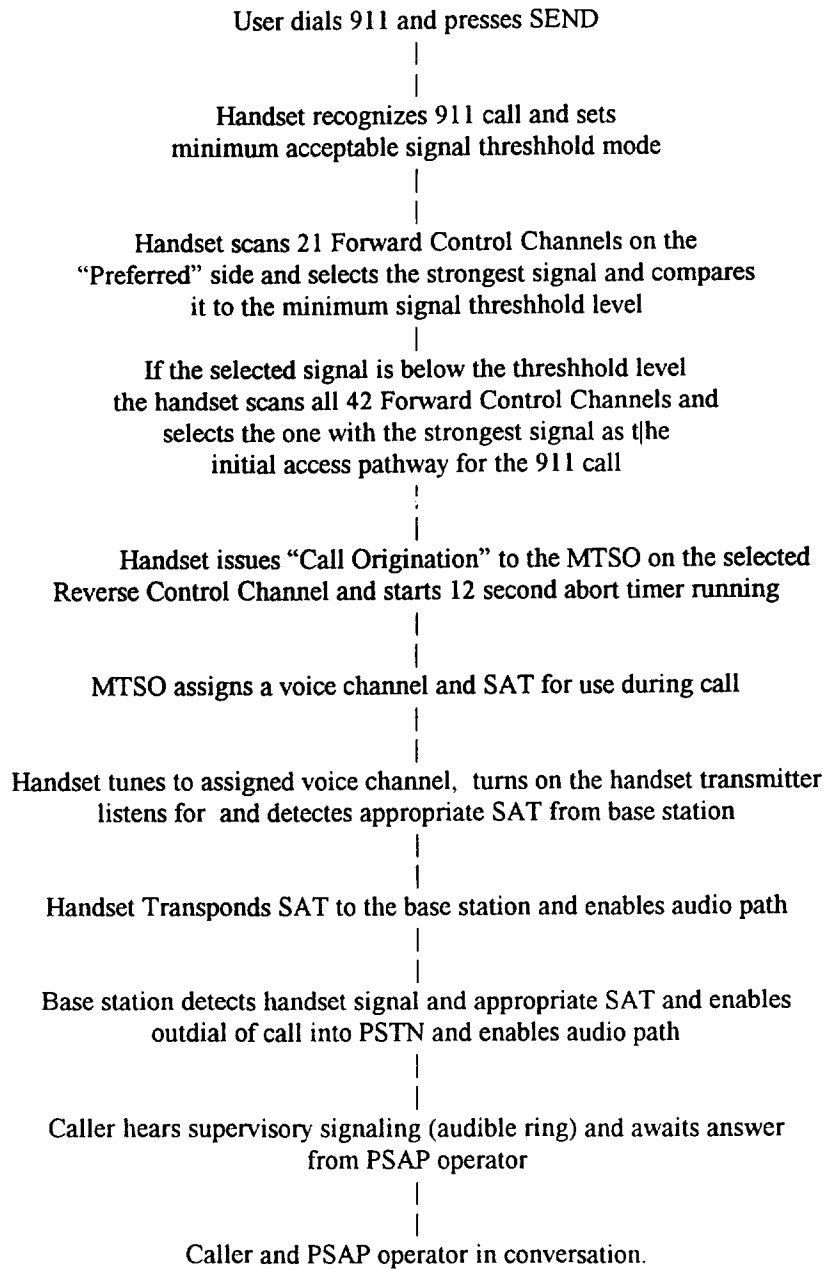
### Strongest / Adequate Signal

*Call flow if "Preferred" carrier signal at or above threshold*



### **Strongest / Adequate Signal**

*Call flow if "Preferred" carrier signal below threshold*



## Advantages/Disadvantages of Automatic A/B Roaming vs. Strongest Adequate Signal

	Automatic A/B Roaming	Strongest/Adequate Signal
Operates within existing standards.	Yes	Yes
Uses the strongest forward control channel to select the access pathway.	Yes.	Yes.
Preferred system provides a good channel for communication. (Signal level of -80 dBm, or better).	The call will be connected to the PSAP on the preferred side. (Estimated time to connect: 4 – 6 seconds).	The call will be connected to the PSAP on the preferred side. (Estimated time to connect: 4 – 6 seconds).
Preferred system provides a <u>substandard</u> channel. Non-preferred system provides a good channel of communication.	<b>Will connect to the PSAP with a poor voice Channel<sup>1</sup> on the preferred side resulting in a <i>weak connection, subject to noise, static, cross-talk and risk of dropped calls<sup>2</sup> during the conversation.</i></b>	<b>Will select the non-preferred side and connect the call to the PSAP with a good channel of communication.</b> Also, the cell site used will be nearest to the emergency which will <b>help to locate the caller.</b>
Preferred system provides an <u>inadequate channel</u> for voice communications. Non-preferred system has a usable channel.	<b>Call will <u>not</u> be connected<sup>3</sup> to the PSAP and handset will be <i>locked-in</i> to the unusable preferred side.</b>	<b>Will select the non-preferred side with the usable channel and connect the call to the PSAP.</b>
<i>No signal</i> is received from the preferred carrier. Usable signal from the other carrier.	Call will be switched to the non-preferred carrier. (Estimated time to connect to PSAP: <b>10 – 16 seconds</b> ).	Call will be switched to the non-preferred carrier. (Estimated time to connect to PSAP: <b>4 – 6 seconds</b> ).
Neither system has an adequate channel.	Call will not be connected.	Call will not be connected.

See next page for footnotes 1, 2 & 3.

**Footnotes:**

Statistics applicable to Automatic A/B Roaming:

<sup>1</sup> NUMBER OF EMERGENCY CALLS ASSIGNED TO A POOR VOICE CHANNEL (Noise, cross-talk, static):

Per day	15,312
Per year	5,512,500

<sup>2</sup> NUMBER OF EMERGENCY CALLS DROPPED:

Per day	5,152
Per year	1,854,794

<sup>3</sup> NUMBER OF EMERGENCY CALLS NOT COMPLETED (Lock-in):

Per day	4,000
Per year	1,439,735

**Basis for analysis.** This analysis is based on CTIA's most recent survey which shows that 98,000 calls are made from wireless telephones to 911 each day. There are 68 million wireless users of which approximately 50 million are cellular customers. Attached is a news report of a survey performed by Emerald Bay Systems of the performance of the wireless telephone systems in Los Angeles. We took the average of these performance numbers for the two analog cellular systems, LA Cellular and AirTouch, as the basis for our analysis. The Los Angeles analog cellular systems were among the first constructed and are more developed than most other cellular systems. For that reason, we believe that our calculations represent the best case analysis and that the number of failed, dropped or provision of a poor channel of communication is higher in the rest of the country. Based on our own survey of the Los Angeles area, which has been filed with the Commission, we can say that **Strongest Signal would have eliminated more than 98% of these problems in the areas that we tested.**

**Lack of more detailed data.** On November 6 & 7, 1997, the Alliance met with CTIA and others, with the encouragement of the Commission's staff, to discuss Strongest Signal. At that time, it was agreed that we would exchange technical information which would enable all parties to reach an informed judgment concerning all aspects of Strongest Signal. In this regard, the Alliance submitted a list of materials needed to evaluate CTIA's "concerns" about "unintended" consequences. A copy of the cover letter and this list is attached. CTIA refused to produce any material, save and except an off the shelf manual about how cellular systems operate. See Attachment. We know that wireless companies track and compile this data and it is reasonable to assume that the reason it was not produced is because it would have been adverse to CTIA's position.

**It's a matter of life and death.** We have brought three cases to the Commission's attention in which Strongest Signal would have made the difference between life and death. In each of these instances, Automatic A/B Roaming would not have changed anything. There are other cases that we have not had the resources to investigate, e.g. attached article from the Sacramento Bee. The real live documented harm that could have been avoided with Strongest Signal is a compelling argument that the public interest requires that the rule change proposed by the Alliance *in October of 1995* be adopted without further delay.

21ST STORY of Level 1 printed in FULL format.

Copyright 1998 Times Mirror Company  
Los Angeles Times

August 10, 1998, Monday, Home Edition

SECTION: Business; Part D; Page 5; Financial Desk

LENGTH: 1038 words

HEADLINE: TELECOM TALK;  
L.A. CELLULAR BEATS RIVALS IN WIRELESS DERBY

BYLINE: JENNIFER OLDHAM

BODY:

In the first study to assess the quality of L.A.'s wireless networks, L.A. Cellular's network performed better than those owned by AirTouch Communications, Sprint PCS and Pacific Bell Mobile Services. The survey did not include Nextel Communications, which built its service out of radio dispatch systems and sells mainly to business customers.

L.A. Cellular's network ranked highest in each of three areas, including call connection, call retention and call quality, that were studied by Milpitas, Calif.-based Emerald Bay Systems. The study compared six networks, including both L.A. Cellular and AirTouch's analog and digital networks. A network is a collection of cellular tower antennas that capture and forward the signals that make up a cell phone conversation.

L.A. Cellular said the findings confirm internal studies.

"What we find encouraging about these findings is that here's an independent third party that reaffirms where we've been all along," said Hank Bonde, L.A. Cellular's president and general manager.

To conduct the study, Emerald Bay purchased phones and calling plans from each of the carriers. For a month in the early summer, the company made about 5,000 two-minute calls on each network from points in Los Angeles, Orange, Riverside, San Bernardino and Ventura counties. Testers, who drove about 9,000 miles in all, made calls from 7 a.m. to 7 p.m. on weekdays.

One of the striking things about the study were the findings for "good call performance," which measures whether a call connects on the first attempt, holds through the conversation and has clear voice quality in both directions.

None of the carriers scored higher than 83% on this measure, with L.A. Cellular's analog service providing "good call performance" about 82.2% of the time; L.A. Cellular's digital service, 80.5%; AirTouch's digital service, 78.2%; its analog service, 75.3%; PacBell, 74.2%; and Sprint, 59%.

These findings demonstrate that wireless phones still have a way to go before they can imitate their land-line cousins in terms of quality and network

Los Angeles Times August 10, 1998, Monday,

access.

Also note that the study is merely a snapshot of what carriers' networks were like on the day they were tested. Industry watchers say L.A.'s size, the number of subscribers here and the area's topography affect wireless networks in different ways on different days.

"Carriers are putting in more networks and cell sites all the time," said Deepak Sant, president of Emerald Bay Systems. "So these things are pretty dynamic--it's not like a land-line network." Because of this, Sant plans to conduct another network study in the five-county region in six months.

AirTouch came in a close second to L.A. Cellular in the overall results category, with the carriers' scores separated in some cases by a single percentage point. PacBell Mobile placed third in the overall results and Sprint PCS fourth. The study found that these digital carriers' networks failed more often to connect calls, while analog carriers' networks had more calls scored as failures because of static or other clarity problems.

The study's findings are not a surprise. As incumbents in the Los Angeles region, L.A. Cellular and AirTouch have had more than a decade to build out and fine-tune their networks. They have also been able to piggyback their digital networks onto existing analog towers.

On the other hand, digital providers, which rely on a portion of the radio spectrum they purchased from the FCC several years ago, have had significantly less time to pump up their infrastructure. PacBell Mobile entered the California market last summer, while Sprint debuted in Southern California last Thanksgiving.

\*

Thus far, PacBell and Sprint have concentrated building efforts in Southern California's most populated areas. Consequently, Sprint does not have service in Riverside, San Bernardino and Ventura counties. PacBell's network covers about 85% of Riverside, San Bernardino and Ventura counties but doesn't extend to the state's border, where testers placed some calls.

Emerald Bay's overall score for Sprint was unfair, said Rod Egdorf, Los Angeles-area vice president for Sprint PCS Southern California/Nevada, because the report averaged the findings from each of the five counties, and Sprint doesn't cover three of the counties studied.

Sprint plans to have service available in Riverside, San Bernardino and Ventura counties sometime this fall, and PacBell also is building out its networks in these counties.

Growing pains for digital carriers' networks don't seem to be harming their image with consumers. Indeed, about 75% of new cell phone subscribers in the first quarter of this year signed up for digital service, said Mark Lowenstein, vice president of Yankee Group, a Boston-based market research firm.

Los Angeles Times August 10, 1998, Monday,

AirTouch also took a dissenting view of some of the study's findings, saying that because it has "significantly more customers" than L.A. Cellular, its network is more crowded--leading to lower access scores in the study.

(BEGIN TEXT OF INFOBOX / INFOGRAPHIC)

#### Battle of the Networks

L.A. Cellular rated No. 1 in the first study of wireless networks in the five-county Los Angeles region. How each of the six networks tested by Milpitas, Calif.-based Emerald Bay Systems ranked in the areas of network access, call retention and call performance:

Network	Call connection rate*	Call retention rate*	Good call performance**
AirTouch analog	94.1%	92.4%	75.3%
AirTouch Powerband	89.3	87.2	78.2
L.A. Cellular analog	94.8	93.3	82.2
L.A. Cellular			
SmartDigital	95.5	92.6	80.5
Pacific Bell	84.6	82.5	74.2
Sprint PCS	69.4	66.8	59.0

Note: Results include findings from Los Angeles, Orange, Riverside, San Bernardino and Ventura counties.

\*Call connection measures whether the call connects on the first try. A retained call is one that connects on the first try and holds through the conversation.

\*\* A good call is defined as one that connects on the first try, holds through the conversation and has good voice quality in both directions.

GRAPHIC: GRAPHIC-TABLE: Battle of the Networks

LANGUAGE: English

LOAD-DATE: August 10, 1998

26TH STORY of Level 1 printed in FULL format.

Copyright 1994 McClatchy Newspapers, Inc.  
Sacramento Bee

July 10, 1994, METRO FINAL

SECTION: METRO; Pg. B1

LENGTH: 2440 words

HEADLINE: CELLULAR CALLERS CLOG 911 SYSTEM

BYLINE: Wayne Wilson, Bee Staff Writer

BODY:

When two friends disappeared under the fast-flowing waters of a canal near Auburn, Shaun Rooney grabbed his cellular telephone and hit the numbers 911.

All he heard was "beep-beep, beep-beep."

So he tried again: "beep-beep, beep-beep." Again . . . and again

\* \* \*

As fire raced through his half-million-dollar home on the shore of Folsom Lake, Patrick Maguire punched in a 911 call on a phone in the car he was steering out of harm's way.

"I got a 24-hour recording," Maguire said.

\* \* \*

In Citrus Heights, David Tilley armed himself with a 16-gauge shotgun and a cordless telephone after being robbed at gunpoint during a pingpong game with friends in the garage of his home.

"I hit 911, and it just rang," Tilley said. "I tried again and it kept ringing. Then the operator called and she couldn't get through. Finally, I fired a shot in the air. I always heard the police come sooner when shots are fired."

\* \* \*

Three emergencies. Three failures in the 911 system.

Which is not to say the two 17-year-old boys who drowned could have been saved from the treacherous waters of an Auburn canal.

Or that a lakefront home would not have been destroyed by flames.

Or that a more rapid police response could have nabbed the men responsible for the residential armed robbery.

But it is a reminder that 911 is a system with chinks, especially when the relatively new application of cellular technology is added to the mix.

Sacramento Bee, July 10, 1994

Officials can point to successes since cellular calls were introduced to the 911 system in the mid-1980s: numerous saved lives and quicker notification of and responses from police, fire and medical agencies nationwide.

\* The Southern Californian whose cellular call to 911 during an October 1993 firestorm elicited the life-saving suggestion that he cover himself with a wet blanket and huddle in the corner of an empty swimming pool.

\* The Los Angeles woman who, barely conscious, guided rescuers to her wrecked car by telling a 911 operator through a mobile phone whether the sirens were getting louder or softer.

Success stories like these, and others chronicled by William Shatner on the popular television program, "Rescue 911," are legion.

But they do not salve the ire of those whose bad experiences with the 911 system have been painful, frustrating and sometimes deadly.

Even Allan G. Tolman, chief of the state telecommunications division that is directly responsible for California's 911 network, has experienced the anguish of making a cellular 911 call that went unanswered for 17 rings.

"I can empathize with all those who have suffered such frustration," he said the other day.

But there are no easy answers, he said.

The problem is not in the technology, he said. It is in the number of people available to handle the massive number of calls that often flood the cellular 911 communications center at California Highway Patrol headquarters.

Unlike land-line calls, which are answered and dispatched locally and are traceable to a specific address, every 911 call from a cellular phone goes directly to the CHP.

When mobile phones first appeared on the scene, almost all were mounted in cars. Because most emergency calls from cellular units would relate to highway situations, the thinking went, responsibility for handling such calls should be delegated to the CHP.

But the explosion of cellular phone sales and the proliferation of hand-held units that can be carried far from the road have created unanticipated problems and an extraordinarily heavy volume of calls.

"There are a whole lot of cellular phones in handbags, briefcases and pockets," Tolman said.

The Sacramento Communications Center is a room in the basement of CHP headquarters in downtown Sacramento. It has three radios and 10 desks with multi-button phones.

At any given time, there are usually only two or three, and no more than five people answering cellular 911 calls from six CHP areas in five counties.

Sacramento Bee, July 10, 1994

According to Lt. Steve Lykins, commander of the center, cellular calls from Sacramento, Placer, El Dorado, Yolo and parts of Nevada counties are all funneled to the people at the Sacramento center who, by the flick of a button, can refer the call to the proper Public Safety Answering Point (PSAP), the agency that dispatches the appropriate emergency response team.

When a 12-year-old boy was injured May 7 at a baseball game in Newcastle, a spectator in the bleachers used a cellular phone to call 911. It took more than one effort and some time to get through, the caller later reported, and when the connection was finally made, it was to a CHP operator in Sacramento.

Three minutes of conversation established that the ballpark was in Placer County and that it was a medical emergency, so the CHP operator punched the button connecting the caller to the PSAP in Auburn.

From there it was passed off to the California Department of Forestry and Fire Protection, which serves as a secondary PSAP to route such calls to the specific agency nearest the emergency, and the forestry agency relayed it to the Fire Department in Newcastle, which dispatched its medical emergency response team.

So the call, when it did finally connect, had to go through four different hands before help was on its way.

That isn't the case when a 911 call is made from a person's home or business on a traditional land line.

Under the enhanced 911 system currently used nationwide, a Master Street Address Guide associates every land-line call to an address and every address to the proper jurisdiction.

So when a person calls 911 from a regular phone, that phone's address immediately appears on the screen of a computer at the proper dispatch center and a prompt response is possible, whether the caller can express the exact nature of the call or not.

It's not quite as simple as that when cellular phones are involved because, even if such technology existed in cellular units, the address of the subscriber is not likely to be the site of the emergency.

According to Tolman, there is "technology coming out that will utilize a geographic positioning system to pinpoint calls" using the cell sites that relay each call toward its eventual destination.

But at this point in its development, the addition of that capability could boost the cost of a cellular phone to about \$ 3,000, Tolman said.

Until that technology matures and becomes more affordable, cellular 911 callers will have to put up with problems inherent in a system that has grown far beyond its staffing levels.

Cellular 911 calls start out as radio signals passed from one spot to another by solar-generated cell sites.

Sacramento Bee, July 10, 1994

Although companies like Cellular One and Air Touch attempt to blanket an area with cell sites, there are some spots that remain out of touch, and if a call is generated from such a "blank" area, the call will not go through.

"People treat it as a perfect, foolproof system, and it just isn't," said Grace Brett, the center's manager.

When there is a major event witnessed by many people with car phones, the cellular calls can number in the hundreds, Brett said.

When a call is completed, it is imperative for callers to be able to pinpoint their location.

The CHP employee may not be familiar with a landmark in Meadow Vista or Placerville or Woodland, so the caller should be prepared to name the county, the community and the cross streets nearest the emergency.

Not all of the callers' problems are a result of shorthanded staffs or overloaded phone lines.

Some of the difficulties are caused by the users themselves: Misdialings in frantic situations or low or dead batteries.

Nancy Frank, public affairs director at Cellular One, said all cellular companies try to educate customers.

But some cellular phone owners use 911 indiscriminately: to obtain traffic or road conditions; to ask for directions; to test their phones. Lykins has even received calls from businessmen who want the 911 operator to pass along messages to others: "I'm running late," or "My car broke down."

The bottom-line advice offered by all experts in the field is:

If you find yourself in an emergency situation and have equal access to a land-line telephone or a cellular unit, by all means make your 911 call on the traditional phone.

But don't hesitate to use a cellular unit if a traditional phone is not available.

LANGUAGE: ENGLISH

LOAD-DATE: July 11, 1994

# Ad Hoc Alliance for Public Access to 911

Alliance for Technology Access•Arizona Consumers League•National Consumers League•World Institute on Disability•National Emergency Number Association–California Chapter•Crime Victims United•Justice for Murder Victims•California Cellular Phone Owners Association•Florida Consumer Fraud Watch•Center for Public Interest Law•Consumer Action•Consumer Coalition of California•Consumers First•California Alliance for Consumer Protection•Californians Against Regulatory Excess•The Office of Communication of the United Church of Christ•Utility Consumer Action Network•Children's Advocacy Institute

November 12, 1997

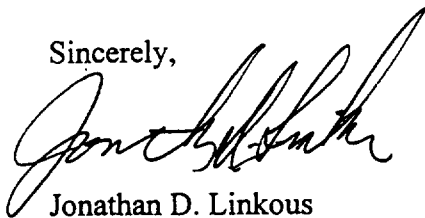
Mr. Jeff Crolick  
SCC Communications Corporation  
6411 113th Avenue  
Temple Terrace, FL 33617

Dear Jeff,

We have prepared and attached a list of material which we expect the wireless industry to produce on or before December 15 as per our agreement to exchange technical information by that date. We will need this material in order to be reasonably prepared for our meetings during the week of January 5, 1998.

Thank you for your courtesy and cooperation.

Sincerely,



Jonathan D. Linkous

enclosed:

cc: Jim Hobson, NENA  
Bob Gurss, APCO  
Mary Madigan, PCIA  
Ed Hall, CTIA

Questions for Industry:

1. What percentage of the 38,000+ cell sites now deployed in the U.S. have more than 6db difference in measured signal strength between their control and voice channels?
2. What percentage of 9-1-1 call originations using the Alliance proposed Strongest Compatible Signal (SCS) algorithm will result in being assigned a weaker voice channel than that which would be obtained using the existing EIA/TIA-553 algorithm? Why will this occur?
3. What percentage of the 38,000+ cell sites now deployed in the U.S. provide "Portable Grade Coverage" (-95dbm minimum signal level on the street) signal quality throughout their coverage area?
4. What percentage of each Metropolitan Statistical Area (MSA) and Rural Statistical Area (RSA), by carrier, fails to meet the Portable Grade Coverage (-95dbm minimum signal level on the street) signal quality?
5. What is the Busy Hour Call Blockage Ratio (i.e. PO2, PO3, etc.) for the ten busiest cells in each of the top thirty markets, by carrier? (During the business day, i.e. "Peak" and during nights and weekends, i.e. "Non-Peak")
6. What percentage of call connect time (voice channel occupancy) do phones in the top thirty markets experience Carrier to Interference ratios worse than 17db?
7. How many Temporary Directory Numbers (or equivalent) are being maintained in each Mobile Telephone Switching Office (MTSO) in each of the top one hundred markets, by carrier?

# Ad Hoc Alliance for Public Access to 911

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Alliance for Technology Access•Arizona Consumers League•National Consumers League•World Institute on Disability•National Emergency Number Association•California Chapter•Crime Victims United•Justice for Murder Victims•California Cellular Phone Owners Association•Florida Consumer Fraud Watch•Center for Public Interest Law•Consumer Action•Consumer Coalition of California•Consumers First•California Alliance for Consumer Protection•Californians Against Regulatory Excess•The Office of Communication of the United Church of Christ•Utility Consumer Action Network•Children's Advocacy Institute

December 23, 1997

Mr. Ed Hall  
CTIA  
1250 Connecticut Avenue, N.W.  
Suite 200  
Washington, D.C. 20036

Dear Ed:

Reference is made to your e-mail of December 19, 1997. As you know, we were not invited to participate in the establishment of WEIAD and we apparently have some basic misconceptions about the structure of the group and its purpose. We had assumed that WEIAD was formed in response to the Federal Communication Commission (FCC) direction, in its Report and Order released on July 26, 1996 in Docket No. 94-102, that the parties, including the Alliance, meet in an effort to assist the Commission with respect to certain defined issues.

Our presentations concerning "Strongest Signal" and "TLDN" have been documented and on file with the FCC for twenty months. In its Further Notice of Proposed Rulemaking, the FCC said "[i]f a commenter believes that Alliance's [Strongest Signal] proposal is technically infeasible, it should provide its reasons in detail, with supporting engineering analyses". ¶ 144. No such detail or analyses was provided in the time set forth by the FCC. Nevertheless, members of the Wireless Industry since made a number of *ex parte* presentations to the FCC concerning the Strongest Signal proposal. Our review of the *ex parte* filings failed to disclose the specific basis for any objections.

When we were invited to attend WEIAD II in Baltimore on November 6, 1997, we were asked to make a presentation concerning Strongest Signal and TLDNs. We made such a presentation with the caveat that the Strongest Signal issue is ripe for decision and further delay was clearly against the public interest. However, we carefully listened to the "objections" to our proposals which were presented at WEIAD II. These objections were not supported by empirical or engineering data. Nevertheless, we agreed

to further technical discussions provided that written statements of the objections and supporting information were provided to us by December 15 so that we could come to the January technical discussions fully prepared to go forward. Our letter to Jeff Crolick of November 12 spelled out the type of information we expected to receive in support of the objections voiced at WEIAD II. On December 2, you advised that the information we requested is not relevant and not available. We stated that such information would not be relevant if the objections are withdrawn. Objections based on data that cannot, or will not be revealed, are not acceptable for discussion.

My email of December 17, 1997 to Jeff Crolick summarizes our discussion concerning the ground rules and reiterates what we have been saying since the outset concerning our agreement to proceed with these discussions. Your email of December 19 responds to this letter with "rulings from the chair" which are not acceptable to us. Nothing in the FCC Report and Order said that our meetings were to occur under the auspices of the Wireless Industry, based on its agenda, pursuant to its rules and subject to its dictates. We assumed that the role of the co-chairs of WEIAD was merely ministerial and any thing more is not appropriate.

We have made repeated efforts since the issuance of the Report and Order to meet with the Wireless Industry for the purpose of engaging in good faith discussions as requested by the FCC. We were excluded from such meetings until the public safety groups insisted that we be invited to WEIAD II, more than a year and one half after the Report and Order was issued. At the time of WEIAD II we questioned the good faith of the Wireless Industry in attempting to engage us in discussions of Strongest Signal and TLDN and stated that we were concerned that the further meetings could simply be for the purpose of obfuscation and delay. We were assured that this was not the case, and despite our reservations, we agreed to proceed on the understanding that the meeting was to openly discuss those industry concerns that were raised in Baltimore. We agreed to provide you with copies of the technical data which supports our proposal and we have done so. You agreed to supply us with any and all written technical opposition to our proposal along with the supporting documentation. We were sent two publicly available documents and two other public documents were identified which we, of course, already had. We asked that you advise us what objections are supported by these documents and for references to the appropriate pages or sections. None has been forthcoming.

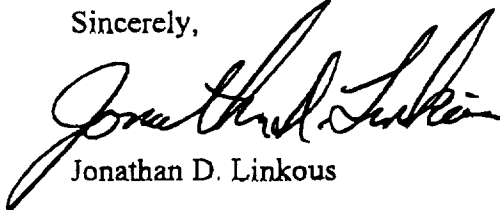
As you know, we have attempted to meet the verbalized concerns of the Wireless Industry by modifying our Strongest Signal proposal for EIA/TIA 553 phones. It appears that all four public documents address the TLDN issue and are silent on Strongest Signal. In addition, there have been sent to us two contributions with respect solely to the TLDN (or TCN) proposal. Lacking any stated objections, we, therefore, must assume there is agreement and there is no reason for a meeting on our Strongest Signal proposal.

The TLDN submissions confirms the technical validity of our proposal. The one contribution suggests an alternative proposal, limiting service to "validated mobiles". This has already been rejected by the FCC and, therefore, there is no reason for

discussion of this alternative. The issue raised in these materials relates to cost -- which is not a technical issue. Conclusionary statements concerning cost are not helpful.

In view of the above, it appears that there is no longer any reason for the two technical meetings prior to WEIAD III. If cost is the issue to be discussed at WEIAD III then we would expect to receive the complete information to support this discussion prior to the meeting so we can come prepared.

Sincerely,



Jonathan D. Linkous

cc: Mike Altschul  
Terry Brooks  
Jeff Crollick  
Bob Gurss  
Jim Hobson  
Mary Madigan

## Phase I and Phase II

# PHASE I

By April 1, 1998, Wireless Carriers will provide:

- Caller's number, and
- Location of the nearest antenna site

to PSAPs who request that service.

**Caller's number.** Carriers already have the capacity to provide the call back number resident in the cellular phone and the location of the nearest antenna site. The Alliance has already provided a solution to call back to *any* cellular telephone, including those without a number. This solution was found to be technically feasible on January 6 & 7, 1998, in the WEIAD Callback working group. However, the group concluded "if the percentage of situations where there is no call back capability is already low (possibly under 2%), there may be little or no justification for further actions."<sup>1</sup>

**Location of nearest antenna site:** Most wireless carriers have the capability of giving the PSAP the location of the antenna site which received the call. (E.g. AT&T spokesman in Seattle, "said the company has the capability of letting E-911 centers know which antenna is being used but isn't being asked for that information." *The News Tribune*, May 3, 1998). Indeed, in rural areas this information is already being gathered by the use of distinct telephone numbers which are assigned to the antenna sites. Strongest Signal would improve the quality of this information because it would select the nearest antenna site. The Blomme case is a good example where the selection of the preferred, more distant antenna site, resulted in a fatal delay in emergency equipment arriving on the scene.

<sup>1</sup> The following page relates to credibility. It contains a small sample of the statements filed with this Commission attacking the Alliance's call back proposal. It is now evident that the wireless industry was willing to make these statements to the Commission, not because they were true, but in support of the agenda of the industry to limit the number of 911 calls they must handle. See discussion *infra* concerning the same motivation in connection with statements made concerning Strongest/Adequate Signal. The statements of the 911 administrators that call back was "critical" also casts doubt on their credibility because when the solution was found it turned out that the problem was "under 2 % of the time" and not worth the cost of implementing.

**Footnote 1 (False statements made to the Commission):**

- The Alliance seemingly has confused the role of a temporary mobile directory number ("MDN") -- used within a carrier's network only when a customer is roaming -- with the need for an addressable number programmed into a handset. Without an addressable number, no handset can be called back, even if a temporary MDN is assigned. (CTIA, p.5).
- "Pseudo-MIN" based call back capability is technically infeasible unless the call has passed the wireless carrier's switch validation process. (PCIA, p. 6)
- The Ad Hoc Alliance has assumed that cellular switches, as currently configured, are capable of providing call back for all 911 callers, whether or not the call has been validated. As pointed out by GTE in its earlier filing, this is not correct. Rather, call back is not possible unless the mobile has been service initialized by the home carrier, has passed the global challenge if authenticable in an authentication-enabled market, and has not had call delivery turned off. (GTE, p. 3-4).
- No technology has been developed that has call-back capability if service has not been initialized. . . . There are considerable technical obstacles to overcome to implement the Phase I callback capabilities envisioned in the Commission's rules. (Airtouch, p. 2 & 4).

**but probably true:**

- Many PSAPs do not want all 911 calls passed to them. (AT&T, p. 2)

## PHASE II

### By October 1, 2001, Carriers will provide PSAPs with:

- Location of the caller within 400 feet at least two-thirds of the time.

The argument here is that wireless carriers would be discouraged from early deployment of Phase II by Strongest Signal because they would enjoy no market advantage by being early. It is now apparent that there will be no early deployment of Phase II except in some isolated situations:

- "I wonder if they (cellular companies) are trying to slow down the whole process," Munn said. (Bill Munn, then president of NENA). "It is ironic, because the cellular companies are marketing cellular phones as a safety device, but they have opposed us nationwide on requiring location technology." *The Fort Worth Star-Telegram*, December 28, 1996.
- "Phase II (unlike Phase I) is universally acknowledged as a technical quagmire". *America's Network*, June 1, 1998.
- Wireless "E-911 is years away in Florida." *Sun-Sentinel*, June 15, 1998.
- Bill Vogler, deputy director of the Washington Association of Counties, says wireless carriers who will benefit financially from offering commercial location services should not expect the public to pay for Phase II. He "noted that US West and other telephone companies benefitted from the technology that brought E-911 service. The telephone companies now sell products such as Caller I.D., Call Blocking and Last-Call Retrieval - all of which stemmed from the work done to develop E-911, he said." *The News Tribune*, May 3, 1998.

**IF THE DECISION TO SELECT  
AUTOMATIC A/B ROAMING OR  
STRONGEST SIGNAL IS LEFT TO THE  
WIRELESS CARRIERS OR  
MANUFACTURERS, THERE WILL BE  
NO MARKET CHOICE FOR  
CONSUMERS BECAUSE STRONGEST  
SIGNAL WILL NOT BE AVAILABLE**

THERE IS NO DIRECT TO THE CONSUMER MARKET FOR CELLULAR TELEPHONES. All cellular telephones are purchased by wireless carriers from the manufacturers and distributed to retail outlets at a below cost price. Its like the razor industry -- give away the razor because the profit is in the blades. For this reason, almost all, if not all, cellular phones are programmed to operate on one side only and the customer is warned by the carrier not to change that setting. (See Attachment). If given the choice, all cellular carriers will select and purchase only Automatic A/B Roaming because **Strongest Signal will connect more 911 (~~non-revenue~~) calls than Automatic A/B Roaming and more of those calls will be from non-subscribers (*which carries a higher risk of liability*). Strongest Signal also hurts the wireless industry's case for antenna siting..** (See next page).

### **Increased risk of liability.**

- “If adopted, the alliance (Strongest Signal) proposal would increase the potential liability faced by analog cellular carriers for not transmitting calls”. *Crain Communications*, October 12, 1998, quoting Ameritech.
- “The cellular industry has alleged the alliance is a front for trial lawyers who want to sue wireless companies for 911 lapses.” *Austin American-Statesman*, July 18, 1998.
- “Folks are saying, ‘Excuse me, you want me to put out this new capability (E911), which is going to enable someone to sue me for some kind of act of God that resulted from my delivery of this service?’”. *RCR*, interview with CTIA President Wheeler, February 8, 1999.

### **Profit before public safety**

- “there was never much money to be made in wireless 911.” *Telephony*, October 21, 1996).
- Carriers have insufficient infrastructure for peak busy hours to handle revenue calls.
  - “In the worst spots in the system, he said, one call in 10 may not get through”. *The New York Times*, July 10, 1995, quoting a Comcast spokesman.
- AT&T operator responded to emergency call with “Who are you billing this to?” “I [the injured caller] said I need the police department, and the whole time I’m hysterically crying. She said ‘I know. Whose going to pay for the call?’”. *The Patriot Ledger*, January 30, 1999. (See next page for similar example).

### **Antenna siting.**

- “for sure, implementing the alliance’s proposal . . . could hurt the industry’s case for antenna siting. *Crain Communications*, October 12, 1998.

# WIRELESS CONSUMERS ALLIANCE

## Wireless Consumers Alliance

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## Wireless Consumers Alliance

### What's Hot

WHAT'S HOT

### What happened to that emergency call in Missouri?

Mr. Thomas E. Wheeler, president of the cellular telephone association, gave a speech on 11/12/98 which was critical of the FCC and the State of Missouri because the state provides \*55 for wireless callers to reach the highway patrol. Mr. Wheeler told his audience about a news story of a fatal accident on Thanksgiving day, 1997, which he concluded by saying "if [the wireless number for the highway patrol in Missouri] had been 9-1-1 there might have been another Thanksgiving for a two year-old boy and his mother".

In fact, this mother and her two year old boy did not die because the FCC has not mandated 9-1-1 as the universal emergency number. 9-1-1 is the primary emergency number in Missouri. The purpose of \*55 is to connect wireless emergency calls which are made from the highway directly to the Highway Patrol. Lt. Ricks of the Missouri Highway Patrol said "the 9-1-1 system should automatically dial the nearest police department and they can always relay that information to us with a push of the button".

According to a report in the Kansas City Star, the reason that this 9-1-1 call was not promptly answered by the police dispatchers was because it was misrouted to the administrative number of the Joplin police department. Was this carrier error? If so, is this type of error covered under the Limited Liability laws being pushed by the carriers?

The Star also reports that the caller "said she first tried [to] get a number for the Highway Patrol. She got a message [from the carrier] saying it was a collect call, asking for credit information." Had this call been connected at that time then, indeed, there "might have been another Thanksgiving for a two year-old boy and his mother".

Wireless carriers who use the public airwaves are required to

have as a basic purpose not only the objective of making profits but also that of furthering the public interest. Unfortunately corporate decisions in the wireless industry are too often driven solely by bottom line considerations. Stories such as the one recited by Mr. Wheeler tragically underscore this problem. We question the wisdom of continued Commission forbearance of Title II regulations where safety of life and property are at stake. It is time to re-visit this issue.

[back](#)



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WIRELESS CONSUMERS ALLIANCE, INC.

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# CONCLUSION . . . .

The perceived self interest of the wireless industry is to limit the number of 911 calls they must carry. To that end, the record in Docket 94-102 has been filled with unsupported, unsubstantiated "concerns" and phantom unintended consequences by the wireless carriers and those who curry its favor. This deplorable tactic has had the desired result of causing confusion and delay -- over three years of delay.

"Assuring prompt delivery of emergency 911 calls from whatever source, without delay, best serves the public interest". Chairman Kennard, *Newsday*, 12/3/97. The Alliance has provided several examples of injury and death which would have been prevented by Strongest Signal. None of these consequences would have been avoided by Automatic A/B Roaming. We respectfully submit that the Commission should adopt Strongest/Adequate Signal -- such a rule is clearly needed to protect the public.

## Business students learning on Burkenroad

By Anne Rochell Konigsmark  
STAFF WRITER

Lafitte, La. — A team of analysts has traveled by shrimping skiff through a bayou to grill executives of a small oil and gas company on the future of their bottom line. Standing on a rig overlooking four oil wells, they talk about touchy subjects: environmental regulations, falling oil prices and thus fall's hot weather, a bad thing for folks who rely on the nation using heating oil early and often.

After this field trip, the analysts will produce a report on the company for a financial newsletter called the Burkenroad Reports. They'll have to squeeze in the report between other priorities, however. Like homework. And basketball.

These analysts do not come from Wall Street but from a class at Tulane University in New Orleans. They are seniors and graduate business students whose classroom has become oil rigs, helicopter pads and potato chip factories from Texas to Alabama. And while the students are learning how real-world businesses operate, the small companies are getting exposure through the newsletter to potential investors they normally would not get.



Ricchiuti

"We analyze what we like to call stocks under rocks," says the founder of Burkenroad Reports, Peter Ricchiuti, a former stockbroker and state financial officer who is now the placement director for Tulane's business school. "We're analyzing small companies and writing reports that investors use."

Burkenroad Reports, named for its benefactor, William Burkenroad, a wealthy Tulane alumnus, began in 1993 as an extracurricular activity and is now a course open to senior business majors and graduate students. Tulane is the only university in the country with such a program, although it reflects a larger trend among business schools to provide students with hands-on experiences.

The reports go out once a year to 3,000 investors, Ricchiuti says. About two-thirds are institutional investors,

## CELL PHONES IN BLACKOUT ZONES

# A lifeline or a dead end?

**Not getting through:** Firms tout their wireless phones as safety devices, but what they don't say may hurt you.

By Michael E. Kanell  
STAFF WRITER

Pursued by two armed men along Castle Heights Boulevard in Los Angeles as she futilely tapped at the keypad of her wireless phone, Marcia Spielholz drove through a cellular dead zone.

Driving through an area where there were no transmitters operated by L.A. Cellular, the company that sold her service, each call the 37-year-old film executive frantically made to 911 was answered with silence. Spielholz could not get her phone to connect and she didn't make it home that night. For Spielholz, the failure to connect was near-fatal, and four years later she struggles to live with the consequences. But others might also shudder at her trauma. Many of America's 65 million wireless users purchase the phone service only for emergencies, and everyone would like to have a way to call for aid in an emergency.

But a wireless phone in a dead zone is like a home phone with its wires cut.

And wireless phones are being pressed into emergency service constantly. An estimated 50,000 calls each day

hills block radio signals. No map shows the side roads and back streets where a company just doesn't think it pays to place a cell site. And without enormous investment, no company can guarantee each square foot within its coverage area.

Which raises the question: "Do consumers know that?"

Cellular companies pump their service in ways that seemingly suggest coverage is complete. Atlanta-based BellSouth has run ads proclaiming "You'll Run Out of Gas

Mark Feidler, president of BellSouth Mobility, said he is aware that the company's coverage is not perfect.

"There are holes in the coverage, and the people who use our service for a while understand that," he said. "The question is, do they understand that at the time of the sale? We train our [sales] people. We tell them that, if asked, they've got to be honest about it. We make that clear in our contracts with customers. We make that clear in our discovery maps.

We'd like to eliminate those holes, but as a practical matter, that's not going to happen."

Powertel shows customers a computer-generated model that shows whether there is coverage or not at any point they choose — the kids' school, the road to the office, the mailbox at the end of the driveway.

That isn't always enough, said Powertel Vice President Mike Bashaw with a sigh. "They expect service to work perfectly all the time. The expectation is always higher than reality."

Some consumers are new to wireless and see it as a kind of magic. Or they believe the service is provided by satellites — not by transmitters whose signal can be blocked by a ridge.

The key to avoiding surprises is education, said AirTouch spokeswoman Suzy Deering. "You just have to be realistic. This is a safety tool, but you've got to use it with common sense."



Photo courtesy of Marcia Spielholz

**Marcia Spielholz**, in a before-the-accident photo, filed a false-advertising suit against L.A. Cellular after she was

# INDUSTRY SHAKE-UP

## From beer to chocolates

### GROWTH BY ACQUISITION: A LOOK AT CADBURY SCHWEPPE'S RISE

Cadbury Schweppes was created in 1969 with the merger of Cadbury and Schweppes.

The company's lineage, however, extends to the late 1700s when Jacob Schweppe perfected a process for producing mineral water in Switzerland and in the early 1800s when John Cadbury first started selling cocoa, tea and coffee in the United Kingdom.

Cadbury Schweppes increased its focus on beverages and confectionery in the mid-1980s with the start of a string of acquisitions and a move to rid itself of non-core businesses.

■ **1986:** Company acquires Canada Dry and the rights to Sunkist brands to strengthen its soft drinks line, and it sells Typhoo Tea, Kenco coffee and Jeyes.

■ **1987:** Creates joint beverages venture with Coca-Cola, called Coca-Cola & Schweppes Beverages, in Great Britain. Acquires Red Tulip confectionery brand in Australia.

■ **1989:** Acquires Crush soft drinks and Bassett and Trebor confectionery business. Also purchases Chocolates Hueso and the TriNaranjus soft drinks brand.

■ **1990:** Acquires Oasis soft drinks in France.

■ **1992:** Acquires Aguas Minerales mineral water in Mexico and a majority interest in Piasten confectionery in Germany.

■ **1993:** Acquires A&W root beer brands in the United States and a majority interest in Stani confectionery in Argentina.

■ **1994:** Acquires Bouquet d'Or confectionery in France and Dulciora confectionery in Spain.

■ **1995:** Acquires Dr Pepper/Seven-Up in the United States. Also purchases Allan Candy sugar confectionery in Canada.

■ **1996:** Acquires Neilson Cadbury in Canada. Sells bottler in England co-owned with Coca-Cola Co. to Atlanta-based Coca Cola Enterprises.

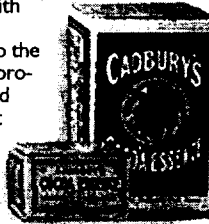
■ **1997:** Sells 51 percent stake in Coca-Cola & Schweppes Beverages. Acquires Jaret International Inc., a U.S. sugar confectionery distributor. Other confectionery acquisitions include Bim Bim in Egypt and La Pie Qui Chante in France. Company also sells its Sodastream Ltd. confectionery business in the U.K.

■ **February 1998:** Cadbury Schweppes announces formation of a joint venture with Carlyle Group to buy two Midwest bottlers: Beverage America of Michigan and Select Beverages of Chicago.

■ **September 1998:** Company buys E. Wedel confectionery business in Poland from Pepsico.

■ **Friday:** Company reaches deal to sell its soft drink brands in most territories outside the United States to Coca-Cola Co. for \$1.85 billion.

Sources: Cadbury Schweppes, staff research



## Cellular: Blackout zones controversial

► Continued from E1

has no account at all. "They used to block 911 calls if you were not a paid subscriber," Hilliard said. "Now, the companies carry it, but they fought it every inch of the way."

Hilliard now calls for technology that connects a 911 call to the strongest signal, no matter who the carrier is. CTIA has an alternative proposal, arguing that the strong signal could come from the site most likely to be busy with other calls.

CTIA's Ayers also said the industry resisted the "take all 911 calls" rule because it makes it easier to call in false alarms from a phone without a traceable number.

And any policy under consideration can be disconnected when the technology used by a phone does not mesh with a carrier's system. Users with some phones can reprogram their phones to improve their chances, but even then, the lifeline sometimes can be horribly cut.

A year ago Thanksgiving, the Lechuga family was returning from a stay with relatives east of Los Angeles. Coming through the mountains, their car slid off the road and down an embankment. Joseph Lechuga was apparently killed in the accident. His children, aged 6 and 4, froze to death. Dolores Lechuga died either of cold or attack by animals. But not before she tried dialing for help.

Because the family had AirTouch service, the call reached an AirTouch cell site — not the transmitter with the strongest signal. The AirTouch site recorded the link, then electronically asked the phone to transfer to a conversation channel. But the signal wasn't strong enough to carry talk, so the link was broken.

MGM. She has been told to limit talking, since it hinders her healing. And she has sued L.A. Cellular, which is 60 percent owned by Atlanta-based BellSouth and 40 percent by AT&T.

Spielholz argues that the company promised seamless coverage over 30,000 square miles of Los Angeles. In the company's sales pitch, wireless phones were dubbed "the crime fighter of the '90s." Ads made frequent references to safety and peace of mind.

"That is why I got the phone and never asked my company to pay for it," she said.

After shopping that December night, taking the road that ran from Culver City toward Beverly Hills, she was overtaken by the strangers' car in a section called Beverly Wood — well inside the "footprint" of L.A. Cellular coverage.

So when she realized her life was in danger, she reached for the phone.

"It never occurred to me that I wouldn't get service," she said.

### False-advertising suit

Spielholz has filed suit requesting damages for the injury she suffered. That suit is scheduled for trial in the spring. In a separate, class-action suit, she charges L.A. Cellular with false advertising. Other customers who have felt betrayed — in less dramatic ways than Spielholz — have joined that suit, said Spielholz attorney Jackie Mottek.



**Powertel**  
executive  
Mike Bashaw  
says customers have high expectations.

Before Mottek represented Spielholz, that second suit was dismissed on what Mottek said were procedural grounds. The dismissal, made "without prejudice," permitted the plaintiff to refile, and she has.

There is no controlling precedent, since no similar cases have been litigated. However,

...companies came in 1969, after their leaders met at a trade conference they faced a problem. The problem was the company needed over- vision to keep up its growth. Each lacked the huge resources of the American companies whom they needed to

...a major thrust for Cadbury Schweppes has been in the U.S. market. For example, it bought Dry and Sunkist soft drink from RJR Nabisco for \$1 billion. That gave the company a 5.3 percent stake in soft drink sales, the fourth-largest soft drink company in the nation.

territories outside the United States to Coca-Cola Co. for \$1.85 billion Sources: Cadbury Schweppes, staff research

The acquisition of the Dr Pepper and 7Up lines in 1995 was Cadbury Schweppes' biggest move since the 1969 merger.

Cadbury Schweppes now is in third place in the \$55 billion-a-year U.S. market, with a 15 percent share.

Coke has 43.9 percent and PepsiCo has 30.9 percent.

Much of Cadbury Schweppes' U.S. distribution is handled by its rivals — 32 percent by Pepsi and 24 percent by Coke. The rest travels to market through independent bottling companies and Cadbury Schweppes.

Chief Executive John

Sunderland said in London last week that he may use proceeds of the sale to Coca-Cola, perhaps as much as \$1.07 billion after taxes, to buy up chocolate businesses worldwide and to acquire yet more U.S. beverage companies.

Thus the scramble for market share will continue.

"Cadbury is saying they see the U.S. as a big market and believe they can enhance their position," said Kenneth Levy, head of retail fund managing at Old Mutual Asset Managers in London, which has more than \$40 billion in assets under management, including Cadbury shares.

# focus is on the long haul

...be interested in properties.

...is the worldwide attention helped push

...are seeing from a standpoint out there is a situation taking place in the industry. Automobiles, telecommunications, across the board consolidation is taking place by the soft drink companies that lead to that. These brands and the organization arrived and prospered and on their own is they'll just result of being a part of the Coca-

...areas where you are going to be regulated in getting this

...a regulatory cause of anti-trust those kinds of

...of that takes something that's for the local government really anticipates out there.

...is impact the United States

between Coca-Cola and Cadbury Schweppes (which is keeping its beverage operations here)?

**A:** We have a good relationship in the U.S. — our bottlers carry some of their products. That's been a situation that existed for many, many years. And we understand it, they understand it, and I don't see that it's going to alter it in any way.

**Q:** Do you think that it's going to intensify the competition between the two companies here in the United States, because they're going to have a lot more money and they would be able to put that into their own bottling operation?

**A:** You'll have to ask them what they intend to do with the money, and draw a conclusion based on what they intend to do with the money. If they put the money in the candy business, that's a different story.

**Q:** At [Friday] morning's analyst meeting, you didn't really address the 1999 earnings outlook, other than what you've said in the past. Why not?

**A:** Each one of the analysts who are in the meeting are competitive. They all have their own model. We don't tell them what the number is. They all have their models, they all have their expertise, they're all smart people and they all make different

assumptions. One of them assumes the dollar's going to go one way, another one assumes the dollar's going to go another way.

**Q:** Given the way the economy has been going and the fact that the expectation is going to be lower than thought for the fourth quarter, should investors be concerned?

**A:** ... Should investors have been concerned about the Coca-Cola Co. in the 1930s in the U.S.? Should they have been concerned about the Coca-Cola Co. when Latin America was having some turmoil in the 1980s? The answer is, this is a long-term business. ...The company has demonstrated the ability to build per-capita consumption of its products over 113 years, and I believe when you look out 10 years from now that you're going to be very, very pleased that you made an investment in the Coca-Cola Co. in 1998 — in the fourth quarter of 1998, even. There's nothing about the current environment that we see that changes our fundamental outlook on this business.

**Q:** And that's what you've said all along.

**A:** By the way, I said that in 1982, when the company's stock dropped 10 percent. It went on a relative basis... from \$2 to \$1.80. Everybody was asking the exact same question. And everyone that I know that bought that stock at \$1.80 feels really good today.

...nel. But the signal wasn't strong enough to carry talk, so the link was broken.

Those records indicate that Dolores Lechuga tried to make six calls — and got nothing but dead air.

## Nightmares

Questions about coverage are in the air every day in Atlanta, one of the nation's best markets for wireless service.

More than 30 percent of the area's residents have wireless phones, according to analysts. That translates to more than 1 million users — many moving in and out of coverage every day. For each one who carries a wireless phone and believes that it is a constant electronic lifeline, that notion could too easily turn into a nightmare.

For Spielholz, the nightmare grew deeper as she drove, futilely prodding the pad of her phone — baffled at its uselessness. "I wasn't in a canyon," she said. "I wasn't between tall buildings. I wasn't in a garage. I was in a nice residential area, and all I got was dead air."

She figured that the men had seen her leave a shopping mall and wanted to rob her. Or maybe they wanted her BMW 840. Either way, she didn't want to stop — she wanted help. Hampered by other traffic, Spielholz dodged and weaved along a strip of west Los Angeles until their car cut her off. The two men jumped out, one pointing a gun at her. She turned and ducked as two shots were fired.

She knew she had been hit. She tried once more calling for help. But now, a bullet had blown apart the wireless phone in her hand — along with part of her face. She kept trying to talk, pretending she had police on the line. Her assailants fled.

"There was blood all over, but I thought I'd been shot in the shoulder," she said. "Then I looked in the mirror and realized I had a hole in my jaw."

She drove her car to an intersection and stopped, hoping to draw attention. She did. From a nearby home, police were called — arriving moments later. Since then, she has had 15 surgeries. She has left her job as the globe-trotting senior vice president of

refile, and she has.

There is no controlling precedent, since no similar cases have been litigated. However, the issue is one that wireless users confront constantly, so more cases may arise, she said. "I think this is just the beginning."

L.A. Cellular officials do not say that the first dismissal of the case undermines its credibility. In fact, they are loath to discuss the Spielholz incident at all — or anything relating to the story.

"We can't comment on any pending legal cases," said spokesman John Mendez.

He declined to discuss L.A. Cellular's service area in 1994, how service is marketed or how marketing has changed since 1994. He declined to talk about

the company's advertising campaigns or even to confirm that the company does advertise.

However, the company has added a disclaimer to its ads, a fine-print notice that coverage is not ubiquitous.

That's the way it must be, argued BellSouth's Feidler. Carriers already spend hundreds of millions of dollars each year expanding their cover-

age, and there is a limit to how much they can spend, he said.

Yes, consumers must be educated, but they are best protected by competition.

"Wireless has never had the model of government deciding what people want, what people pay. That is the land-line telephone model," Feidler said.

But Hilliard said the government must consider regulation requiring carriers to complete their coverage areas.

He compares it to the laws committing regional Bells to make land-line phone service available to all, including customers in hard-to-serve rural areas.

These companies use public airwaves, and early providers like BellSouth were virtually handed spectrum that has been worth billions of dollars. Despite the enormous revenues they reap, carriers are judicious about installing new cellular sites, Hilliard said.

"They do studies. If they see a 40 percent return on the investment, then they might do it. It comes down to business."



**BellSouth Mobility's Mark Feidler** said he knows coverage is not perfect.